

**In the claims:**

**1. (Currently amended)** A method of resisting corrosion of metals in a concrete structure comprising:

creating an overlay containing at least one compound capable of sequestering chloride ions, ~~said compound selected from the group consisting of~~  
 ~~$3\text{Me(II)}\text{O}\cdot\text{R}_2\text{O}_3\cdot\text{Me(II)}(\text{anion})_2\cdot n\text{H}_2\text{O}$  where  $n=0$  to 24 and~~  
 ~~$3\text{Me(II)}\text{O}\cdot\text{R}_2\text{O}_3\cdot\text{Me(II)}(\text{anion})\cdot n\text{H}_2\text{O}$  where  $n=0$  to 18,~~

~~wherein Me(II) is one or more cations selected from the group consisting of Ca, Ba, Sr, Mn and Zn,  $\text{R}_2$  is  $\text{Al}_2$ ,  $\text{Fe}_2$  or  $\text{Cr}_2$ , anion is  $\text{NO}_2$ ,  $\text{NO}_3$ ,  $\text{CO}_3$ ,  $\text{BO}_4$ , or  $\text{OH}$ , but when  $\text{R}_2$  is  $\text{Al}_2$  then Me(II) is not Ca;~~

securing said overlay adjacent to said concrete structure, and  
 sequestering chloride ions in said overlay, said overlay being preformed prior to said securing.

**2. (Currently amended)** The method of Claim 1 including wherein said securing of said overlay to said concrete structure to permits chloride ion exchange therebetween.

**3. (Cancelled)**

**4. (Cancelled)**

**5. (Currently amended)** The method of Claim 4 including securing said preformed overlay to said concrete structure by adhesive.

**6. (Original)** The method of Claim 1 including effecting said securing to establish surface-to-surface contact between said overlay and said concrete structure.

**7. (Cancelled)**

**8. (Cancelled)**

**9. (Currently amended)** The method of Claim 8 including further comprising providing said a second layer over said overlay with lower porosity than said slurry-layer overlay.

**10. (Original)** The method of Claim 1 including

employing a material selected from the group consisting of concrete, asphalt, Portland cement, clay, calcium aluminate cement, and mortar in said overlay.

11. **(Original)** The method of Claim 1 including introducing high ionic strength liquid into said overlay.
12. **(Original)** The method of Claim 1 including employing said method on a concrete structure disposed at least partially under water.
13. **(Original)** The method of Claim 1 including performing said process without requiring ongoing input of electrical energy.
14. **(Original)** The method of Claim 1 including establishing said overlay with a thickness of about 0.5 to 10 inches.
15. **(Previously presented)** The method of Claim 1 wherein said compound establishes a corrosion resistant oxide layer on embedded metal elements.
16. **(Previously presented)** The method of Claim 1 wherein said chloride sequestration results in a chloride-containing compound having low solubility in said concrete.
17. **(Original)** The method of Claim 1 including employing a nitrite-containing compound as said compound.
18. **(Original)** The method of Claim 1 including employing said method on metal elements made of steel.
19. **(Currently amended)** The method of Claim 2 1 including wherein employing as said compound, ~~a compound~~ is capable of liberating nitrite ions.
20. **(Currently amended)** A method of resisting corrosion of metals in a concrete structure comprising: creating an overlay containing at least one compound capable of sequestering chloride ions, securing said overlay adjacent to said concrete structure, and sequestering chloride ions in said overlay. The method of Claim 1 including employing as said compound a said compound selected from the group consisting of

$3\text{CaO}\cdot\text{Fe}_2\text{O}_3\cdot\text{Ca}(\text{NO}_2)_2\cdot n\text{H}_2\text{O}$ ; and  $3\text{CaO}\cdot\text{Fe}_2\text{O}_3\cdot\text{Ca}(\text{NO}_3)_2\cdot n\text{H}_2\text{O}$  wherein  $n = 0$  to  $24$ .

21. (Cancelled)

22. (Original) The method of Claim 14 including establishing said overlay with a thickness of about 1 to 4 inches.

23. (Cancelled)

24. (Currently amended) The method of Claim 1 including wherein said metals ~~being~~ are embedded reinforcing elements.

25. (Cancelled)

26. (Original) The method of Claim 1 including effecting said overlay creation by mixing said compound in dry form with cement in dry form and subsequently adding water to said compound and cement mixture.

27. (Original) The method of Claim 26 including adding other ingredients to said mixture prior to adding said water.

28. (Cancelled)

29. (Currently amended) A concrete assembly comprising  
a concrete structure,  
a plurality of metal elements within said concrete structure,  
an overlay containing a compound capable of sequestering chloride ions disposed within said concrete structure, ~~said compound selected from the group consisting of~~  
 ~~$3\text{Me}(\text{II})\text{O}\cdot\text{R}_2\text{O}_3\cdot\text{Me}(\text{II})(\text{anion})_2\cdot n\text{H}_2\text{O}$  where  $n = 0$  to  $24$  and~~  
 ~~$3\text{Me}(\text{II})\text{O}\cdot\text{R}_2\text{O}_3\cdot\text{Me}(\text{II})(\text{anion})\cdot n\text{H}_2\text{O}$  where  $n = 0$  to  $18$ ,~~  
~~wherein Me(II) is one or more cations selected from the~~  
~~group consisting of Ca, Ba, Sr, Mn and Zn,  $\text{R}_2$  is  $\text{Al}_2$ ,  $\text{Fe}_2$  or  $\text{Cr}_2$ , anion is  $\text{NO}_2$ ,~~  
 ~~$\text{NO}_3$ ,  $\text{CO}_3$ ,  $\text{BO}_4$ , or  $\text{OH}$ , but when  $\text{R}_2$  is  $\text{Al}_2$  then Me(II) is not Ca; and~~  
said concrete structure and said overlay being disposed in close adjacency to permit ion exchange between pores of said concrete structure and said overlay, and said overlay being preformed.

30. (Original) The concrete structure of Claim 29 including said concrete structure being a portion of a bridge.

31. (Original) The concrete structure of Claim 29 including said concrete structure being a portion of a pier.

32. (Original) The concrete structure of Claim 29 including

said concrete structure being a portion of a highway.

33. **(Original)** The concrete structure of Claim 29 including said concrete structure being a portion of a parking garage or parking lot.

34. **(Previously presented)** The concrete structure of Claim 29 wherein said compound establishes a corrosion resistant oxide layer on said metal reinforcing elements.

35. **(Previously presented)** The concrete structure of Claim 29 wherein said chloride ion sequestration results in a chloride-containing compound having low solubility in said concrete.

36. **(Original)** The concrete structure of Claim 29 including said chloride ion sequestering compound being a compound containing nitrite.

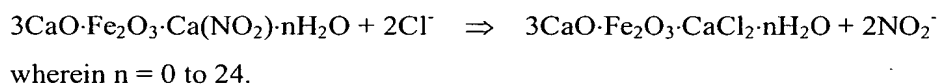
37. **(Previously presented)** The concrete structure of Claim 29 including said compound being selected from the group consisting of  $3\text{CaO}\cdot\text{Fe}_2\text{O}_3\cdot\text{Ca}(\text{NO}_2)_2\cdot n\text{H}_2\text{O}$  and  $3\text{CaO}\cdot\text{Fe}_2\text{O}_3\cdot\text{Ca}(\text{NO}_2)\cdot n\text{H}_2\text{O}$  wherein  $n = 0$  to 24.

38 – 39 **(Cancelled)**

40. **(Previously presented)** A compound capable of sequestering chloride comprising a compound selected from a group consisting of  $3\text{CaO}\cdot\text{Fe}_2\text{O}_3\cdot\text{Ca}(\text{NO}_2)_2\cdot n\text{H}_2\text{O}$  and  $3\text{CaO}\cdot\text{Fe}_2\text{O}_3\cdot\text{Ca}(\text{NO}_2)\cdot n\text{H}_2\text{O}$  wherein  $n = 0$  to 24.

41. **(Cancelled)**

42. **(Currently amended)** A method of resisting corrosion of metals in a concrete structure comprising: creating an overlay containing at least one compound capable of sequestering chloride ions, securing said overlay adjacent to said concrete structure, and sequestering chloride ions in said overlay. The method of Claim 1 including employing the following reaction in sequestering said chloride ions



43. **(New)** The method of Claim 1 wherein said compound is selected from the group consisting of  $3\text{Me}(\text{II})\text{O}\cdot\text{R}_2\text{O}_3\cdot\text{Me}(\text{II})(\text{anion})_2\cdot n\text{H}_2\text{O}$  and  $3\text{Me}(\text{II})\text{O}\cdot\text{R}_2\text{O}_3\cdot\text{Me}(\text{II})(\text{anion})\cdot n\text{H}_2\text{O}$ , wherein  $\text{Me}(\text{II})$  is one or more cations,  $\text{R}_2$  is  $\text{Al}_2$ ,  $\text{Fe}_2$  or  $\text{Cr}_2$ , anion is  $\text{NO}_2$ ,  $\text{NO}_3$ ,  $\text{CO}_3$ ,  $\text{BO}_4$ , or  $\text{OH}$  and  $n$  is 0 to 24.

**44. (New)** The concrete structure of Claim 29, wherein said compound is selected from the group consisting of  $3\text{Me(II)O}\cdot\text{R}_2\text{O}_3\cdot\text{Me(II)(anion)}_2\cdot n\text{H}_2\text{O}$  and  $3\text{Me(II)O}\cdot\text{R}_2\text{O}_3\cdot\text{Me(II)(anion)}\cdot n\text{H}_2\text{O}$  wherein Me(II) is one or more cations,  $\text{R}_2$  is  $\text{Al}_2$ ,  $\text{Fe}_2$  or  $\text{Cr}_2$ , anion is  $\text{NO}_2$ ,  $\text{NO}_3$ ,  $\text{CO}_3$ ,  $\text{BO}_4$ , or OH and n is 0 to 24.